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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application of:
Steven S. Homer et al.

Serial No.: 09/818,284

Filed: March 27, 2001

For: COMPRESSED I/O CONNECTOR
LAYOUT WITH SHARED POST

§ Group Art Unit: 2182
§
§ Examiner: Mai, Rijue
§ Atty. Docket: 200301944-1
§ COMP:0204/FLE/SWA

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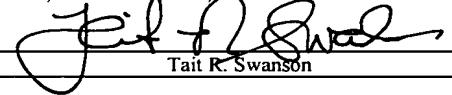
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Tait R. Swanson

APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 1.191 AND 1.192

Appellants file this Appeal Brief, in triplicate, in furtherance to the Notice of Appeal transmitted by First Class Mail to the U.S. Patent and Trademark Office on March 1, 2004, and received by the U.S. Patent and Trademark Office on March 4, 2004.

As discussed in detail below, the Appellants believe the Examiner has expended unnecessary time and resources, both of the Patent Office and Appellants, with unreasonable rejections and incomplete readings of the prior art and the present claims. In the Final Office Action, the Examiner's Section 102 rejections clearly misinterpret certain claim features, such as a shared connector disposed between adjacent ports. The Examiner also misinterpreted the cited reference, Reid, U.S. Patent No. 5,982,614 (hereinafter "Reid" or "the Reid reference"). As discussed in detail below, the Reid reference discloses a cable 300 having multiple terminators 322, 324, 326, and 328 at a first end 320 and a single terminator 310 at a second end 312, yet the single terminator 310 at the second end 312 of the cable 330 is never positioned *between a plurality of adjacent ports*, e.g., ports on the same panel or device. *See Reid, Figs. 1 and 3, Col. 6, line 57 – Col. 7, line 27.* In fact, the single terminator 310 is only intended for *plugging into* the socket 210 of the docking means 200. Thus, the single terminator 310 is clearly incapable of being disposed *between adjacent ports for sharing* among those ports. In view of these misinterpretations, the Appellants emphasize the Examiner's failure to interpret the claims in a reasonable manner, which is consistent with regard to the scope of the present application and with regard to the interpretation that those of ordinary skill in the art would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999). Moreover, the Appellants stress that the prior art reference must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989).

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For these reasons, as set forth in further detail below, Appellants respectfully request that the Board find claims 1-50 patentable over the prior art of record and withdraw all outstanding rejections.

1. **REAL PARTY IN INTEREST**

The real party in interest is Hewlett-Packard Development Company, LP, a limited partnership established under the laws of the state of Texas and having a principal place of business at 20555 S.H. 249 Houston, TX 77070, U.S.A. (hereinafter "HPDC"). HPDC is a Texas limited partnership and is a wholly owned affiliate of Hewlett-Packard Company, a Delaware corporation, headquartered in Palo Alto, CA. The general or managing partner of HPDC is HPQ Holdings, LLC. HPDC is the successor in interest to Compaq Computer Corporation, which is the originally recorded Assignee of the above-referenced application.

2. **RELATED APPEALS AND INTERFERENCES**

Appellants are unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellants' legal representative in this Appeal.

3. **STATUS OF CLAIMS**

Claims 1-50 are currently pending, and claims 1-50 are currently under final rejection and, thus, are the subject of this appeal.

4. **STATUS OF AMENDMENTS**

The Appellants have not submitted any amendments subsequent to the Final Office Action mailed on December 30, 2003.

5. **SUMMARY OF THE INVENTION AND OF THE DISCLOSED EMBODIMENTS**

Computer systems generally comprise a plurality of ports for coupling peripheral devices to the computer system. *See Application, Background, Page 2, lines 11-12.* For example, the computer system may have a parallel port for a printer, a serial port for a mouse or keyboard, and a variety of other ports for communication, data exchange, and interaction with other devices. *See Application, Background, Page 2, lines 12-16.* Some of these ports, particularly the parallel port, consume a considerable amount of space. *See Application, Background, Page 2, lines 18-19.* Accordingly, the space requirements of some ports may create problems for electronic devices having limited space, or for devices that are intended to be compact or portable. *See Application, Background, Page 2, lines 19-21.* For example, one or more ports may be eliminated to ensure that a portable computer has the desired dimensions. *See Application, Background, Page 3, lines 8-11.*

Embodiments of the present invention provide a space-saving port configuration, which utilizes a common connector structure between adjacent ports to reduce spacing between the adjacent ports. *See Application, Summary, Page 3, line 21 – Page 4, line 1.* For example, in the embodiment of Figure 3, a shared connector 82 is disposed between ports 42 and 44 and a shared connector 84 is disposed between ports 44 and 46 on a communication panel 40. *See Application, Detailed Description, Page 8, lines 7-9.* Referring to Figures 2 and 3, the shared connector 82 replaces or combines the adjacent connectors 56 and 58, while the shared connector 84 replaces or combines the adjacent connectors 60 and 62. *See Application, Detailed Description, Page 8, lines 9-11.* Thus, the ports 42, 44, and 46 are positioned closer together on the communication panel 40 by means of the shared connectors 82 and 84. *See Application, Detailed Description, Page 8, lines 11-15.*

6. **ISSUES**

Whether claims 1-50 are unpatentable under 35 U.S.C. 102(e) as anticipated by Reid, U.S. Pat. No. 5,982,614.

7. **GROUPING OF CLAIMS**

- Group 1: Independent claim 1 and dependent claims 2-13 will stand or fall together.
- Group 2: Dependent claim 14 will stand or fall separately.
- Group 3: Dependent claim 15 will stand or fall separately.
- Group 4: Dependent claim 16 will stand or fall separately.
- Group 5: Independent claim 17 and dependent claims 18-21 and 23-25 will stand or fall together.
- Group 6: Dependent claim 22 will stand or fall separately.
- Group 7: Dependent claim 26 will stand or fall separately.
- Group 8: Dependent claim 27 will stand or fall separately.
- Group 9: Independent claim 28 and dependent claims 29, 30, and 32 will stand or fall together.
- Group 10: Dependent claim 31 will stand or fall separately.
- Group 11: Dependent claim 33 will stand or fall separately.
- Group 12: Independent claim 34 and dependent claims 35-37 will stand or fall together.
- Group 13: Dependent claim 38 will stand or fall separately.
- Group 14: Dependent claim 39 will stand or fall separately.
- Group 15: Dependent claim 40 will stand or fall separately.
- Group 16: Dependent claim 41 will stand or fall separately.
- Group 17: Dependent claim 42 will stand or fall separately.
- Group 18: Independent claim 43 and dependent claims 44-47 will stand or fall together.

Group 19: Dependent claim 48 will stand or fall separately.
Group 20: Dependent claim 49 will stand or fall separately.
Group 21: Dependent claim 50 will stand or fall separately.

8. **ARGUMENT**

In the Final Office Action, the Examiner rejected independent claims 1, 17, 28, 34, and 43 and dependent claims 2-16, 18-27, 29-33, 35-42, and 44-50 under 35 U.S.C. 102(e) as anticipated by the Reid reference. Appellants traverse these rejections and request the Board withdraw the outstanding rejections in view of the following legal precedent and remarks.

Legal Precedent

First, anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, the Appellants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention “*in as complete detail as contained in the ... claim*” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Second, regarding claim interpretation, the claims must be given a reasonable interpretation consistent with the specification. *See In re Prater*, 415 F.2d 1393, 1404-05, 162 U.S.P.Q. 541, 550-51 (C.C.P.A. 1969); *see also In re Morris*, 127 F.3d 1048, 1054-55, 44 U.S.P.Q.2d 1023, 1027-28 (Fed. Cir. 1997); *see also In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); *see also* M.P.E.P. §§ 608.01(o) and 2111. Interpretation of the claims must also be consistent with the interpretation that those skilled in the art would reach. *See In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999); *see also* M.P.E.P. § 2111. As further explained in Section 2111.01 of the M.P.E.P., the words of the claim must be given their plain meaning unless the Appellant has provided a clear definition in the specification. *See In re Zletz*, 893 F.2d 319, 321, 13 U.S.P.Q.2d 1320, 1322 (Fed. Cir. 1989). Again, the plain meaning refers to an interpretation by those of ordinary skill in the art. *See In re Snead*, 710 F.2d 1544, 218 U.S.P.Q. 385 (Fed. Cir. 1983).

Third, regarding the theory of inherency, the extrinsic evidence must make clear that the missing descriptive matter is *necessarily* present in the thing described in the reference, and that it would be so

recognized by persons of ordinary skill. *In re Robertson*, 169 F.3d 743, 49 U.S.P.Q.2d 1949 (Fed. Cir. 1999) (Emphasis Added). The mere fact that a certain thing *may* result from a given set of circumstances is not sufficient. *Id.* In relying upon the theory of inherency, the Examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art. *Ex parte Levy*, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner, in presenting the inherency argument, bears the evidentiary burden and must adequately satisfy this burden. *See id.* Regarding functional limitations, the Examiner must evaluate and consider the functional limitation, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. *See* M.P.E.P. § 2173.05(g); *In re Swinehart*, 169 U.S.P.Q. 226, 229 (C.C.P.A. 1971); *In re Schreiber*, 44 U.S.P.Q.2d 1429, 1432 (Fed. Cir. 1997). If the Examiner believes the functional limitation to be inherent in the cited reference, then the Examiner “must provide some evidence or scientific reasoning to establish the reasonableness of the examiner’s belief that the functional limitation is an inherent characteristic of the prior art.” *Ex parte Skinner*, 2 U.S.P.Q.2d 1788, 1789 (Bd. Pat. App. & Inter. 1986).

Fourth, the *drawings* of the cited reference must be evaluated for what they *reasonably disclose and suggest* to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911, 200 U.S.P.Q. 500 (CCPA 1979).

Group 1 – Independent Claim 1 and Dependent Claims 2-13

Turning to the claims, independent claim 1 recites a port configuration system for a computing device, comprising, *inter alia*, “a plurality of connectors disposed adjacent the plurality of ports, wherein at least two ports of the plurality of ports share a common connector of the plurality of connectors.”

In the Final Office Action, the Examiner asserted that Reid teaches “a plurality of connectors disposed adjacent the plurality of ports, wherein at least two ports of the plurality of ports share a common connector of the plurality of connectors (see col. 7, lines 44-64, Fig. 3).” Paper No. 5, ¶ 4. In addition, the Examiner responded to the Appellants’ previous arguments, stating:

In response, the examiner’s cited references Reid teach the invention as claimed. Reid teaches a plurality of ports (ports 132 . . .) And each port has to have a connection devices (*sic*) attached (such as a connector or adaptor) to associate with communication with other devices, therefore, each connector has disposed adjacent to the port (*sic*) to connect with the cable to other device (see Fig 1).

The Appellants respectfully traverse the Examiner's arguments. The Reid reference does not teach or suggest that "*at least two ports* of the plurality of ports *share a common connector* of the plurality of connectors," as recited by independent claim 1. In sharp contrast, the Reid reference discloses a plurality of independent and distinct input/output ports *separately disposed (not adjacent)* on a desktop computer 110, a portable computer 120, a docking means 200, and various peripheral devices 130. *See Reid, Figs. 1-3; Col. 4, lines 1-3, 33-49; Col. 5, lines 17-37.* However, none of the desktop computer 110, portable computer 120, docking means 200, or peripheral devices 130 has a *shared connector disposed adjacent at least two ports* on any one of these respective devices. Instead, the various input/output ports disposed on these devices are conventional ports, which have their own independent and separate connectors (e.g., two screw posts next to each parallel or serial port). *See Reid, Col. 5, lines 17-37.* One of ordinary skill in the art would have no reason to believe that the input/output ports of Reid share any adjacent connectors. Therefore, the Reid reference fails to teach or suggest that "*at least two ports* of the plurality of ports *share a common connector* of the plurality of connectors," as recited by independent claim 1.

In the Examiner's response to arguments set forth above, the Examiner apparently believes that the terminators disposed on the first and second ends of the cable 300 represent the connectors recited by the instant claim. Again, the Appellants respectfully traverse the Examiner's argument. First, the terminators of the cable 300 are not disposed *adjacent* at least two ports, as recited by the instant claim. *See Reid, Figs. 1-3.* In contrast, the terminators of the cable 300 are all completely *separate* from the desktop computer 110, the portable computer 120, the docking means 200, and the peripheral devices 130.

Second, not one of the terminators of the cable 300 is shared by at least two ports disposed on any one of the various devices (e.g., ports *adjacent* one another). For example, the terminator 310 disposed on the second end 312 of the cable 300 is insertable only into a 50-pin socket 210 of the docking means 200. *See Reid, Figs. 2-3; Col. 6, line 66 – Col. 7, line 2; Col. 7, lines 18-28.* The terminator 310 cannot be shared with any other input/output ports 230 disposed on the docking means 200. Similarly, the terminators 322, 324, 326, and 328 disposed on the second end 320 of the cable 300 are *each individually insertable* into a *different* input/output port 112 disposed on the desktop computer 110. *See Reid, Figs. 1 and 3; Col. 6, lines 57-65.* Again, not one of these terminators 322, 324, 326, or 328 can be shared by any two *adjacent* input/output ports 112 on the desktop computer 110. Although the multiple different terminators 322, 324, 326 and 328 on the first end 320 of the cable 300 lead to a single terminator 310 disposed on the second end 312 of the cable 300, the single terminator 310 is never disposed adjacent the multiple ports 112 of the desktop computer 110. *See Reid, Figs. 1-3.* Therefore, the terminator 310 is not *disposed adjacent* the plurality of input/output ports 112 and, also, *shared* by the plurality of input/out ports 112. Accordingly, the Appellants reiterate that the Reid reference fails to teach or suggest that "*at least two ports* of the plurality of ports *share a common connector* of the plurality of connectors," as recited by the independent claim 1.

For these reasons, the Reid reference fails to anticipate independent claim 1 and its respective dependent claims. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of independent claim 1 and its dependent claims.

Group 2 – Dependent Claim 14

Dependent claim 14 recites, *inter alia*, “each of the at least two ports *has two* of the connectors, one of which is the common connector.” Again, the Appellants emphasize that the Reid reference does not disclose a *common* connector. In fact, the Reid reference discloses conventional input/output ports such as a monitor port, a keyboard port, a mouse port, a serial interface port, a parallel port, a small computer system interface port, a personal computer memory card international association interface port, and so forth. *See* Reid, Col. 5, lines 17-37. The Reid reference does not disclose any special or modified configuration of these ports, but rather these ports are conventional configurations having their own *unshared* connectors (e.g., two *unshared* screw posts disposed about each input/output port 112). Thus, not one of the input/output ports disclosed by Reid actually has two connectors, one of which is a common connector, as recited by dependent claim 14. In view of this deficiency, the Reid reference cannot anticipate dependent claim 14. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of dependent claim 14.

Group 3 – Dependent Claim 15

Dependent claim 15 recites, *inter alia*, “the *common connector* is configured for *mutually exclusive* use by one port of the at least two ports for coupling the *one port* to a desired electronic device.” Appellants reiterate that the Reid reference does not teach or suggest a common connector disposed adjacent at least two adjacent ports. For example, the terminator 310 of the cable 300 cannot be interpreted as a common connector disposed adjacent at least two adjacent ports. Even though the terminator 310 is connected to multiple terminators 322, 324, 326, and 328 at the first end 320 of the cable 300, the cable 300 is not configured for both *sharing and mutually exclusive use* of the terminator 310 by a single port. In fact, the multiple terminators 322, 324, 326, and 328 are clearly limited to *unshared simultaneous* use by multiple input/output ports 112 of the desktop computer 110, i.e., only one terminator for each input/output port. *See* Reid, Figs. 1 and 3; Col. 6, 57-65. Thus, not only is the terminator 310 not a common connector adjacent at least two ports as recited in claim 1, but the multi-terminator configuration at the first end 320 of the cable 300 also fails to meet the recitations of dependent claim 15. In view of these deficiencies, the Reid reference cannot anticipate dependent claim 15. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of dependent claim 15.

Group 4 – Dependent Claim 16

Dependent claim 16 recites, *inter alia*, the plurality of connectors comprise *threaded receptacles* configured to receive screw members adjacent a *communication cable*.” In addition to a clear lack of a common connector adjacent at least two ports, as recited in claim 1, the Appellants respectfully stress that Reid is absolutely devoid of any teaching or suggestion of connectors having threaded receptacles one of which is the common connector, as recited by claim 16. The Appellants reiterate that Reid teaches only conventional input/output ports, such as serial, parallel, and monitor ports. As recognized by one of ordinary skill in the art, conventional input/output ports have *unshared* threaded receptacles disposed on opposite sides of the input/output ports, such that screw members adjacent terminators of a cable may be threaded therein to connect the cable 300 to the input/output port. Therefore, the Appellants stress that the cable 300 and its terminators 310, 322, 324, 326, and 328 cannot represent the connectors having threaded receptacles, as recited by claim 16. In view of this deficiency, the Reid reference cannot anticipate claim 16. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 16.

Group 5 – Independent Claim 17 and Dependent Claims 18-21 and 23-25

Independent claim 17 recites, *inter alia*, “a plurality of connectors disposed on the communication panel adjacent the plurality of ports, wherein the at least two ports share a common connector of the plurality of connectors.” For the reasons discussed in detail above, the Reid reference cannot anticipate claim 17. First, the Reid reference does not even mention any particular type or configuration of connectors disposed on the desktop computer 110, the portable computer 120, the docking means 200, or the peripheral devices 130. The Reid reference simply discloses conventional input/output ports, such as monitor, keyboard, and mouse ports, which do not have any shared or common connector. Given that the *common connector* is actually *disposed on the communication panel*, the Appellants respectfully emphasize that the cable 300 and its terminators 322, 324, 326, 328 and 310 cannot be interpreted as the connectors set forth by claim 17. These terminators are clearly separate from any sort of communication panel on the desktop computer 110, the portable computer 120, and so forth. Moreover, the single terminator 310 is never plugged into input/output ports on the same device as the terminators 322, 324, 326, and 328. Thus, the Examiner’s rejection is clearly improper and cannot stand. In view of these deficiencies, the Reid reference cannot anticipate independent claim 17 or its respective dependent claims. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of independent claim 17 and its dependent claims.

Group 6 – Dependent Claim 22

Dependent claim 22 recites, *inter alia*, “at least one of the plurality of ports comprises a plurality of parallel conductors *configured for coupling with a communication cable via a plug at an end of the communication cable*.” Here, the claim recitations clearly indicate that the communication cable and its respective plug are completely separate from the ports and connectors disposed on the communication panel of

claim 17. Therefore, the Appellants reiterate that the Reid reference discloses only conventional input/output ports that do not have any shared or common connector, and the cable 300 and its respective terminators are completely separate from these various input/output ports. The Examiner's rejection is based on the notion that the terminator 310 of the cable 300 is the common connector, yet the claim recitations set forth above clearly preclude such an interpretation. In view of these deficiencies, the Reid reference cannot anticipate claim 22. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of dependent claim 22.

Group 7 – Dependent Claim 26

Dependent claim 26 recites, *inter alia*, "the at least two ports comprise first and second port types configured for *mutually exclusive* communication with an external device via a *communication connector* adapted to one of the first and second port types." As discussed above with reference to dependent claim 15, the Reid reference does not teach or suggest *mutually exclusive* communication via a communication connector. In sharp contrast, each of the input/output ports disclosed by Reid has a conventional configuration, such that each of the input/output ports can *simultaneously* (not mutually exclusively) communicate with an external device. Regarding the cable 300 disclosed by Reid, the Appellants reiterate that the multiple terminators 322, 324, 326, and 328 are simultaneously and independently connected to input/output ports 112 of the desktop computer 110, such that the desktop computer 110 can communicate with the docking means 200 through the terminator 310. However, not one of these input/output ports 112 or terminators 322, 324, 326, and 328 is configured for *mutually exclusive* communication with an external device, such as the docking means 200. In view of these deficiencies, the Reid reference cannot anticipate dependent claim 26. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of dependent claim 26.

Group 8 – Dependent Claim 27

Dependent claim 27 recites, *inter alia*, "each of the at least two ports *has two* of the connectors, one of which is the common connector." Here again, as discussed in detail above with reference to dependent claim 14, not one of the input/output ports disclosed by Reid actually has a *common connector*, much less a common connector that is *disposed on* the communication panel with at least two ports, as recited by claim 17. In fact, the Reid reference discloses conventional input/output ports such as a monitor port, a keyboard port, a mouse port, a serial interface port, a parallel port, a small computer system interface port, a personal computer memory card international association interface port, and so forth. *See* Reid, Col. 5, lines 17-37. The Reid reference does not disclose any special or modified configuration of these ports, but rather these ports are conventional configurations having their own *unshared* connectors (e.g., two *unshared* screw posts disposed about each input/output port 112). Thus, not one of the input/output ports disclosed by Reid actually has two connectors, one of which is a common connector, as recited by dependent claim 14. In view of these deficiencies, the Reid

reference cannot anticipate dependent claim 27. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of dependent claim 27.

Group 9 – Independent Claim 28 and Dependent Claims 29, 30, and 32

Independent claim 28 recites, *inter alia*, “a common connector disposed on the portable computing device between the first and second communication ports,” which are all disposed on the portable computing device adjacent one another. Again, the Appellants reiterate that the Reid reference does not teach or suggest a *common connector*. In addition, the Reid reference actually fails to disclose a common connector that is actually disposed *between* first and second *adjacent* communication ports, as recited by claim 28. In fact, the cited reference does not teach anything, much less a common connector, that is disposed *between* the various input/output ports *on* the desktop computer 110, the portable computer 120, the docking means 200, or the peripheral devices 130. Therefore, even if the terminators on the cable 300 were disposed in the various input/output ports, these terminators would never be disposed *between* the adjacent input/output ports. Moreover, the terminators on the cable 300 are clearly *not disposed on* the portable computing device, as set forth by claim 28. In view of these deficiencies, the Reid reference cannot anticipate claim 28. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of independent claim 28 and its dependent claims.

Group 10 – Dependent Claim 31

Dependent claim 31 recites, *inter alia*, “the first and second communication ports comprise first and second port types configured for *mutually exclusive* communication with an external device via a *communication connector* adapted to one of the first and second port types.” For the reasons discussed above with reference to dependent claims 15 and 26, the Reid reference also fails to teach or suggest *mutually exclusive* communication using a communication connector. The input/output ports and cable configuration of Reid are clearly limited to *simultaneous* communication, rather than *mutually exclusive* communication, between various computers and devices. Regarding the cable 300 disclosed by Reid, the Appellants reiterate that the multiple terminators 322, 324, 326, and 328 are simultaneously and independently connected to input/output ports 112 of the desktop computer 110, such that the desktop computer 110 can communicate with the docking means 200 through the terminator 310. However, not one of these input/output ports 112 or terminators 322, 324, 326, and 328 is configured for *mutually exclusive* communication with an external device, such as the docking means 200. In view of these deficiencies, the Reid reference cannot anticipate claim 31. Thus, the Appellants respectfully request that the Board reverse the Examiner's rejection of dependent claim 31.

Group 11 – Dependent Claim 33

Dependent claim 33 recites, *inter alia*, “each of the first and second ports *has two adjacent connectors disposed on the portable computing device*, one of the two adjacent connectors being the common connector.” For the reasons discussed above with reference to dependent claims 14 and 27, not one of the input/output ports disclosed by Reid actually has a *common connector*, much less a common connector that is *disposed on* the portable computer device with at least two ports, as recited by claim 33. In fact, the Reid reference discloses conventional input/output ports such as a monitor port, a keyboard port, a mouse port, a serial interface port, a parallel port, a small computer system interface port, a personal computer memory card international association interface port, and so forth. *See* Reid, Col. 5, lines 17-37. The Reid reference does not disclose any special or modified configuration of these ports, but rather these ports are conventional configurations having their own *unshared* connectors (e.g., two *unshared* screw posts disposed about each input/output port 112). Thus, not one of the input/output ports disclosed by Reid actually has two connectors including a common connector disposed on the portable computing device, as recited by dependent claim 14. In view of these omitted claim features, the Appellants emphasize that Reid does not anticipate dependent claim 33. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 33.

Group 12 – Independent Claim 34 and Dependent Claims 35-37

Independent claim 34 recites:

A method of configuring ports for communication between electronic devices, comprising:

disposing a plurality of communication ports on a first electronic device;
locating a plurality of connectors on the first electronic device adjacent the plurality of communication ports;
positioning the plurality of communication ports adjacent one another; and
deploying a single connector of the plurality of connectors between the plurality of communication ports for sharing among the plurality of communication ports.

Here again, claim 34 recites *both* the communication ports and the connectors actually *disposed on* the first electronic device. In addition, claim 34 recites the single connector actually *disposed between* the ports for sharing among those ports. In sharp contrast, the Reid reference does not disclose a *single connector for sharing* among ports, much less a connector that is actually disposed *between* those ports. Instead, the Reid reference discloses a variety of *independent and distinct* input/output ports, which have conventional connector configurations that are *unshared* among the input/output ports. Moreover, the terminators of the cable 300 cannot be disposed between the various input/output ports, because those terminators are limited to direct insertion into one of the respective input/output ports. In view of these deficiencies, the Reid reference cannot anticipate independent claim 34. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of independent claim 34 and its dependent claims.

Group 13 – Dependent Claim 38

Dependent claim 38 recites, *inter alia*, “forming *threaded receptacles* in at least one of the plurality of connectors for mating with screw members of a *communication linkage*.” Again, for the reasons discussed above with reference to claim 16, the Reid reference does not teach or suggest threaded receptacles in at least one of the plurality of connectors. The Reid reference simply discloses a variety of conventional input/output ports and separate terminators on the cable 300. *See Reid, Figs. 1 and 3; Col. 5, lines 17-37; Col. 6, lines 57-65.* The Appellants emphasize that the cable 300 of Reid cannot be interpreted both as the communication linkage of dependent claim 38 and, also, the single connector of independent claim 34. One of ordinary skill in the art would most reasonably and accurately understand the cable 300 and its terminators 310, 322, 324, 326, and 328 to relate to the communication linkage recited by dependent claim 38. As a result, the Reid reference clearly lacks the features recited by independent claim 34 and its dependent claim 38. In view of these deficiencies, the Reid reference cannot anticipate dependent claim 38. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 38.

Group 14 – Dependent Claim 39

Dependent claim 39 recites, *inter alia*, “positioning the single connector comprises *eliminating a number of connectors*, the number being equal to one less than the plurality of communication ports.” In sharp contrast, the cited reference does not teach or suggest eliminating any connectors that are disposed adjacent communication ports on an electronic device, as set forth by claim 34. Again, the Appellants reiterate that the input/output ports of Reid are conventional ports having separate connectors. *See Reid, Figs. 1 and 3; Col. 5, lines 17-37; Col. 6, lines 57-65.* Therefore, the Reid reference does not teach or suggest eliminating any of these separate connectors. In view of these deficiencies, the Reid reference cannot anticipate dependent claim 39. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 39.

Group 15 – Dependent Claim 40

Dependent claim 40 recites, *inter alia*, “positioning the single connector comprises *reducing spacing between the plurality of communication ports*.” In addition to the complete lack of any shared connector between communication ports, as recited by claim 34, the Appellants emphasize the failure of Reid to teach or suggest any space-reducing techniques for the input/output ports disposed on the desktop computer 110, the portable computer 120, the docking means 200, or the peripheral devices 130. In view of this deficiency, the cited reference cannot anticipate dependent claim 40. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 40.

Group 16 – Dependent Claim 41

Dependent claim 41 recites, *inter alia*, “reducing spacing between the plurality of communication ports comprises *reducing a dimension of the computing device.*” For the reasons discussed above with reference to independent claim 34 and dependent claim 40, the cited reference fails to anticipate the instant claim. In addition, the Reid reference does not teach or suggest reducing a dimension of the computing device. In fact, desktop computer 110 and the portable computer 120 of Reid appear to be typical dimensions of those respective devices. In view of this deficiency, the Reid reference cannot anticipate dependent claim 41. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 41.

Group 17 – Dependent Claim 42

Dependent claim 42 recites, *inter alia*, “reducing spacing between the plurality of communication ports comprises *reducing a dimension of a circuit board* for the computing device.” Again, for the reasons discussed above with reference to claims 34, 40 and 41, the Reid reference cannot anticipate the instant claim. Specifically, the Reid reference does not teach or suggest any reduction of a dimension of a *circuit board* disposed in any of these devices. In view of this deficiency, the cited reference fails to anticipate dependent claim 42. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 42.

Group 18 – Independent Claim 43 and Dependent Claims 44-47

Independent claim 43 recites:

A method of minimizing space requirements for a plurality of input/output ports for a portable computing device, comprising:

disposing first and second ports on the portable computing device, wherein the first and second ports have connector members for coupling with an input/ output cable;

positioning the first and second ports adjacent one another; and sharing one of the connector members between the first and second ports.

In contrast to the instant claim, the Reid reference does not disclose a portable computing device having both ports and connector members, which facilitate coupling with an input/output cable. The Reid reference is completely devoid of any sort of connector members for the input/output ports disposed on the desktop computer 110, the portable computer 1209, the docking means 200, and so forth. In addition, the Reid reference does not teach or suggest any sort of *sharing* of connector members *between* first and second ports, as recited by claim 43. In fact, the Reid reference does not disclose any structure, much less a connector, which is actually positioned *between* the various input/output ports. In view of these deficiencies, the Reid reference cannot anticipate independent claim 43 and its respective dependent claims. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of independent claim 43 and its dependent claims.

Group 19 – Dependent Claim 48

Dependent claim 48 recites, *inter alia*, “sharing comprises *eliminating one of the connector members.*” For the reasons discussed above with reference to claim 39, the Reid reference cannot anticipate dependent claim 48. Specifically, the Reid reference does not disclose eliminating any connector members disposed between adjacent input/output ports, as set forth by claim 48. In fact, the Reid reference does not appear to eliminate any connector associated with the adjacent input/output ports. In view of this deficiency, the Reid reference fails to anticipate dependent claim 48. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 48.

Group 20 – Dependent Claim 49

Dependent claim 49 recites, *inter alia*, “sharing comprises *reducing spacing between the first and second ports.*” In addition to the complete lack of any shared connector between ports as recited by claim 43, the Appellants emphasize the failure of Reid to teach or suggest any space-reducing techniques for the input/output ports disposed on the desktop computer 110, the portable computer 120, the docking means 200, or the peripheral devices 130. In view of this deficiency, the cited reference cannot anticipate claim 49. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 49.

Group 21 – Dependent Claim 50

Dependent claim 50 recites, *inter alia*, “reducing spacing between the first and second ports comprises *reducing a dimension of the first electronic device.*” As explained above with reference to claims 41 and 42, the Reid reference does not teach or suggest any dimensional reduction of an electronic device, as recited by the instant claim. In fact, desktop computer 110 and the portable computer 120 of Reid appear to be typical dimensions of those respective devices. One of ordinary skill in the art would have no reason to believe that any sort of space reduction or dimensional change would necessarily flow from the teachings of Reid. Therefore, in view of this deficiency, the Reid reference cannot anticipate dependent claim 50. Thus, the Appellants respectfully request that the Board reverse the Examiner’s rejection of dependent claim 50.

9. **CONCLUSION**

In view of the above remarks, Appellants respectfully submit that the Examiner has provided no supportable position or evidence that claims 1-50 are anticipated by Reid under 35 U.S.C. § 102. Accordingly, Appellants respectfully request that the Board find claims 1-50 patentable over the prior art of record and withdraw all outstanding rejections.

Respectfully submitted,

Date: April 26, 2004



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10. **APPENDIX OF CLAIMS ON APPEAL**

1. (original) A port configuration system for a computing device, comprising:
a plurality of ports configured for communication between a plurality of electronic devices comprising the computing device and at least one peripheral device;
a plurality of connectors disposed adjacent the plurality of ports, wherein at least two ports of the plurality of ports share a common connector of the plurality of connectors.

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2. (original) The system of claim 1, wherein the at least two ports are externally disposed on the computing device.

3. (original) The system of claim 1, wherein the at least two ports are disposed on a portable computing device.

4. (original) The system of claim 3, wherein the portable computing device comprises a laptop computer.

5. (original) The system of claim 3, wherein the portable computing device comprises a palmtop computer.

6. (original) The system of claim 1, wherein the at least two ports are disposed on the peripheral device.

7. (original) The system of claim 6, wherein the peripheral device comprises a portable memory device.

8. (original) The system of claim 1, wherein at least one of the plurality of ports comprises a plurality of parallel pins.

9. (original) The system of claim 1, wherein the plurality of ports comprise a serial port.

10. (original) The system of claim 1, wherein the plurality of ports comprise a parallel port.

11. (original) The system of claim 1, wherein the plurality of ports comprise a midi/game port.

12. (original) The system of claim 1, wherein the plurality of ports comprise a monitor port.

13. (original) The system of claim 1, wherein the plurality of ports comprise a docking port.

14. (original) The system of claim 1, wherein each of the at least two ports has two of the connectors, one of which is the common connector.

15. (original) The system of claim 1, wherein the common connector is configured for mutually exclusive use by one port of the at least two ports for coupling the one port to a desired electronic device.

16. (original) The system of claim 1, wherein the plurality of connectors comprise threaded receptacles configured to receive screw members adjacent a communication cable.

17. (original) A space reduction system for a plurality of communication ports for a portable computing device, comprising:

a communication panel for the portable computing device;

a plurality of ports disposed on the communication panel, wherein at least two ports of the plurality of ports are disposed adjacent one another; and

a plurality of connectors disposed on the communication panel adjacent the plurality of ports, wherein the at least two ports share a common connector of the plurality of connectors.

18. (original) The system of claim 17, wherein the communication panel is disposed on an exterior side of the portable computing device.

19. (original) The system of claim 18, wherein the portable computing device comprises a laptop computer.

20. (original) The system of claim 18, wherein the portable computing device comprises a notebook computer.

21. (original) The system of claim 18, wherein the portable computing device comprises a handheld computing device.

22. (original) The system of claim 17, wherein at least one of the plurality of ports comprises a plurality of parallel conductors configured for coupling with a communication cable via a plug at an end of the communication cable.

23. (original) The system of claim 17, wherein at least one of the plurality of ports comprises a serial port.

24. (original) The system of claim 17, wherein at least one of the plurality of ports comprises a parallel port.

25. (original) The system of claim 17, wherein at least one of the plurality of ports comprises a video port.

26. (original) The system of claim 17, wherein the at least two ports comprise first and second port types configured for mutually exclusive communication with an external device via a communication connector adapted to one of the first and second port types.

27. (original) The system of claim 17, wherein each of the at least two ports has two of the connectors, one of which is the common connector.

28. (original) A system for conserving space, comprising:
a portable computing device having;
a first communication port externally disposed on the portable computing device;
a second communication port externally disposed on the portable computing device adjacent to the first communication port; and
a common connector disposed on the portable computing device between the first and second communication ports.

29. (original) The system of claim 28, wherein the portable computing device comprises one of a laptop computer, a notebook computer, and a subnotebook computer.

30. (original) The system of claim 28, wherein the portable computing device comprises a handheld computing device.

31. (original) The system of claim 28, wherein the first and second communication ports comprise first and second port types configured for mutually exclusive communication with an external device via a communication connector adapted to one of the first and second port types.

32. (original) The system of claim 29, wherein the first and second port types comprise two different port types from of plurality of port types comprising a serial port, a parallel port, a video port, a midi/game port, and a docking port.

33. (original) The system of claim 28, wherein each of the first and second ports has two adjacent connectors disposed on the portable computing device, one of the two adjacent connectors being the common connector.

34. (original) A method of configuring ports for communication between electronic devices, comprising:

disposing a plurality of communication ports on a first electronic device;

locating a plurality of connectors on the first electronic device adjacent the plurality of communication ports;

positioning the plurality of communication ports adjacent one another; and

deploying a single connector of the plurality of connectors between the plurality of communication ports for sharing among the plurality of communication ports.

35. (original) The method of claim 34, wherein disposing comprises disposing the plurality of communication ports on a stationary computing apparatus.

36. (original) The method of claim 34, wherein disposing the first electronic device comprises disposing the plurality of communication ports on a portable computing apparatus.

37. (original) The method of claim 34, wherein disposing the plurality of communication ports comprises disposing at least one port having a plurality of parallel conductor pins on the first electronic device.

38. (original) The method of claim 34, comprising forming threaded receptacles in at least one of the plurality of connectors for mating with screw members of a communication linkage.

39. (original) The method of claim 34, wherein positioning the single connector comprises eliminating a number of connectors, the number being equal to one less than the plurality of communication ports .

40. (original) The method of claim 34, wherein positioning the single connector comprises reducing spacing between the plurality of communication ports.

41. (original) The method of claim 40, wherein reducing spacing between the plurality of communication ports comprises reducing a dimension of the computing device.

42. (original) The method of claim 40, wherein reducing spacing between the plurality of communication ports comprises reducing a dimension of a circuit board for the computing device .

43. (original) A method of minimizing space requirements for a plurality of input/output ports for a portable computing device, comprising:

disposing first and second ports on the portable computing device, wherein the first and second ports have connector members for coupling with an input/output cable;

positioning the first and second ports adjacent one another; and

sharing one of the connector members between the first and second ports.

44. (original) The method of claim 43, wherein disposing comprises disposing the first and second ports on a handheld computer.

45. (original) The method of claim 43, wherein disposing comprises disposing the first and second ports on a laptop computer.

46. (original) The system of claim 43, wherein disposing the first and second ports comprises disposing a serial port on the portable computing device.

47. (original) The system of claim 43, wherein disposing the first and second ports comprises disposing a parallel port on the portable computing device.

48. (original) The method of claim 43, wherein sharing comprises eliminating one of the connector members.

49. (original) The method of claim 43, wherein sharing comprises reducing spacing between the first and second ports.

50. (original) The method of claim 49, wherein reducing spacing between the first and second ports comprises reducing a dimension of the first electronic device.

IN THE
UNITED STATES PATENT AND TRADEMARK OFFICE

OPPE JCT
MAY 04 2004
PATENT & TRADEMARK OFFICE
INVENTOR(S): Steven S. Homer et al.

Confirmation No.: 9244

Application No.: 09/818,284

Examiner: Mai, Rijue

Filing Date: 03-27-2001

Group Art Unit: 2182

Title: COMPRESSED I/O CONNECTOR LAYOUT WITH SHARED POST

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TRANSMITTAL OF APPEAL BRIEF

Sir:

Transmitted herewith in triplicate is the Appeal Brief in this application with respect to the Notice of Appeal filed on March 1, 2004.

The fee for filing this Appeal Brief is (37 CFR 1.17(c)) \$330.00.

(complete (a) or (b) as applicable)

The proceedings herein are for a patent application and the provisions of 37 CFR 1.136(a) apply.

() (a) Applicant petitions for an extension of time under 37 CFR 1.136 (fees: 37 CFR 1.17(a)-(d) for the total number of months checked below:

() one month	\$110.00
() two months	\$420.00
() three months	\$950.00
() four months	\$1480.00

() The extension fee has already been filled in this application.

(X) (b) Applicant believes that no extension of time is required. However, this conditional petition is being made to provide for the possibility that applicant has inadvertently overlooked the need for a petition and fee for extension of time.

Please charge to Deposit Account 08-2025 the sum of \$330.00. At any time during the pendency of this application, please charge any fees required or credit any over payment to Deposit Account 08-2025 pursuant to 37 CFR 1.25. Additionally please charge any fees to Deposit Account 08-2025 under 37 CFR 1.16 through 1.21 inclusive, and any other sections in Title 37 of the Code of Federal Regulations that may regulate fees. A duplicate copy of this sheet is enclosed.

(X) I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents, Alexandria, VA 22313-1450. Date of Deposit: April 26, 2004
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